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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,613	01/30/2004	Dwight M. Smith	27435.002	6773
7590 Constance Gall Rhebergen Bracewell & Patterson LLP P.O. Box 61389 Houston, TX 77208-1389				
			EXAMINER	
			ZHENG, LOIS L	
			ART UNIT	PAPER NUMBER
			1793	
			MAIL DATE	DELIVERY MODE
			02/10/2009 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/768,613

**Applicant(s)**

SMITH, DWIGHT M.

**Examiner**

LOIS ZHENG

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 14-20 and 35-50 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-20 and 35-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Status of Claims***

1. Claims 14, 35, 41 and 46 are amended in view of applicant's amendment filed 24 November 2008. Claims 1-10 remain withdrawn from consideration. Therefore, claims 14-20 and 35-50 are currently under examination.

***Status of Previous Rejections***

2. The rejection of claims 35-36 and 39-40 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hudson US 5,106,435 (Hudson) is withdrawn in view of applicant's claim amendments filed 24 November 2008.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14-17, 20, 35-38, 41-43 and 46-48 are rejected under 35 U.S.C. 103(a) being unpatentable over Chunat et al. US 4,060,433(Chunat).

Chunat teaches a process of foam phosphating a metal surface for form a phosphate coating (abstract). The metal surface treated by the process of Chunat is a steel surface such as an ASTM D609-61 panel(col. 4 lines 19-29). Chunat also teaches that a concentrated phosphate containing solution can be diluted with an aqueous media and/or organic liquid carriers such as a hydrocarbon solvent to produce a

desirable working solution having a pH of about 3.0 to about 5.5(col. 9 lines 26-34, col. 10 lines 1-33). Chumat further teaches that the phosphate in this invention denotes orthophosphate, monohydrogenphosphate and dihydrogenphosphate(col. 6 lines 21-27), preferably dibasic phosphate salts of ammonium or monovalent metals(col. 10 lines 14-16).

Regarding claims 14-15, 20, 35-36, 41 and 46, Chumat teaches the claimed hydrocarbon target fluid(i.e. lubricating fluid) and the claimed phosphorus containing solution comprising the claimed phosphate compounds. In addition, the coating solution of Chumat does not require the presence of alcohol as claimed.

In addition, since Chumat teaches its phosphate coating composition can be applied to bulky three-dimensional metal objects, one of ordinary skill in the art would have found it obvious to have applied the phosphate coating composition to claimed at least part of an engine with expected success since an engine is a bulky three-dimensional object.

Furthermore, the claimed "engine operating conditions" are not explicitly described in the specification or the instant claims, the examiner is interpreting the claimed "engine operating conditions" to be any condition underwhich the engine is running, which includes running the engine during testing or maintenance while the engine housing is open or the engine is exposed. Absence of persuasive factual evidence demonstrating why the form phosphate coating composition of Chumat is not suitable for use under engine operating conditions, the examiner maintains that one of ordinary skill in the art would have found it obvious to have applied the process of

Chunat can be applied to an engine with expected success, even under operating conditions as claimed.

Regarding claims 16, 37, 42 and 47, Chunat further teaches the presence of organic ammonium salts in the coating solution, wherein acetic acid can be used to form such organic ammonium salts(col. 11 lines 8-11), which implies the presence of claimed ammonium acetate.

Regarding claims 17, 38, 43 and 48, the upper limit of the pH(i.e. about 5.5) is very close to the lower limit of the claimed pH of about 6.0. It is well settled that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. See MPEP 2144.05. Therefore, a prima facie case of obviousness exists. The selection of claimed pH range from the disclosed range of Chunat would have been obvious to one skilled in the art since Chunat teaches the same utilities in its disclosed pH range.

5. Claims 18-19, 39-40, 44-45 and 49-50 are rejected under 35 U.S.C. 103(a) being unpatentable over Chunat, and further in view of Hudson.

The teachings of Chunat are discussed in paragraph 4 above.

However, Chunat does not explicitly teach that the monovalent metal for phosphate compounds in its coating solution is the claimed potassium.

Hudson teaches a process of forming a phosphate conversion coating layer on a steel surface(col. 2 lines 33-47, col. 3 lines 13-20). Hudson further teaches that the

coating solution is an aqueous solution comprising phosphate compounds such as mono- and di-basic ammonium phosphate or potassium phosphates(col. 3 lines 24-40).

Regarding claims 18-19, 39-40, 44-45 and 49-50, since Hudson teaches potassium phosphates are also suitable phosphate compounds in a phosphate coating solution, just as suitable as monobasic and dibasic ammonium phosphate, one of ordinary skill in the art would have found it obvious to have incorporated potassium as taught by Hudson as the monovalent metal of the phosphate compound in the coating solution of Chumat with expected success.

#### ***Response to Arguments***

6. Applicant's arguments with respect to Hudson filed 24 November 2008 is moot in view of the withdrawal of claim rejection based on Hudson.

Applicant further argues that Chumat does not teach that the metal substrate comprises at least part of an engine and the contacting of the metal substrate is taken place under engine operating conditions.

The examiner does not find applicant's argument persuasive for the same reasons as set forth in paragraph 4 above.

Applicant further argues that the combination of Hudson and Chumat is not proper because Hudson and Chumat are unrelated references.

The examiner does not find applicant's argument persuasive because both Hudson and Chumat a process that comprises applying a phosphorus containing coating composition to a metal substrate to form a protective conversion coating layer. Although additional process steps are different after the phosphate coatings are applied

in the processes of Hudson and Chumat, one of ordinary skill in the phosphate conversion coating art would have considered both Hudson and Chumat references to be analogous art since both references result in phosphate coatings on metal surfaces. Therefore, the examiner maintains that the rejection is proper.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **LOIS ZHENG** whose telephone number is (571)272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

LLZ  
2/5/08



**Application Number****Application/Control No.**

10/768,613

**Examiner**

LOIS ZHENG

**Applicant(s)/Patent under  
Reexamination**

SMITH, DWIGHT M.

**Art Unit**

1793